ation in November last, a copy having been sent at that time to each member of the California Medical Association.

"Journal of the American Medical Association" Criticisms of Deficiencies in Survey Directors' Tables.—The Journal of the American Medical Association criticisms call particular attention to the somewhat loose manner in which the director of the survey used the terms "adequate" and "inadequate" in compiling his tables. Exception is also taken with the phrases and comment dealing, "With regard to standards or definitions of illness and diagnosis" and "On the subject of medical treatment." Quoting further:

There is a tendency throughout the published tables to exaggerate the lack of medical care, the cost of such services, and the implied defects of the medical profession, by the arrangement of the tables and the wording of the captions. . . .

The Census Bureau of the United States Department of Commerce issues periodic estimates of the population of the states, but there appears no explanation of the use of a local estimate in preference to the Census Bureau estimate of the population. Likewise, the number of physicians in California in 1934 is less by 1,407 than the number given in the 1934 American Medical Directory. . . .

If Figure 16 is used to represent the prevalence rate of specific disease, California is depicted as a very unhealthful place in which to live. . . .

These complete figures for all the recorded physicians in California were available at the time the California Medical Economic Survey was conducted. The California survey figures give a grossly distorted picture of the percentage of general practitioners and specialists in that state. . . .

The tables and figures in this report give the reader the impression that there has been an effort to arrange a build-up for sickness insurance. . . .

Survey Project Has Been Completed.—In these columns in former issues of California and WESTERN MEDICINE, in order to avoid controversy, nothing more has been sought other than to place on printed record, in the Official Journal of the California Medical Association, the informative facts that this FERA-WPA project had been completed to the satisfaction of the Federal authorities, and that the final report as submitted by the survey director was the property of the State of California, to be used or reprinted only in such manner as the constituted State agency appointed by the Federal authorities—in this instance the California State Board of Public Health—deemed proper. It is gratifying to know that the Council of the Association will be in a position to report to the House of Delegates in May that this survey adventure, which was begun in 1934, is finally a completed task.

Other State Association and Component County Society News.—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 274.

## EDITORIAL COMMENT<sup>†</sup>

## THE TREATMENT OF CHRONIC OCCLUSIVE PERIPHERAL ARTERIAL DISEASE

The sufferer from chronic peripheral occlusive arterial disease presents a problem which has only recently received the more serious attention of the profession. These affections take a heavy yearly toll in incapacity, suffering, loss of limb and, much too often, loss of life. It is imperative, therefore, that the sufferer be given every chance to preserve the integrity of his extremities and the loss of his activity.

The first duty of the physician is to establish, if possible, the nature of the effection. The vascular diagnostician must be fully conversant with the anatomy and physiology of the peripheral circulation, and the relationship of the autonomic nervous system to it. To the general examination, and examination of the vascular competency of the extremity, must be added an estimation of the part played by the sympathetic nervous system in the disability. This estimation of arterioconstriction should be quantitatively determined by utilizing an accepted method of vasomotor study. The treatment of the individual case will depend in a great measure upon the available vasodilatation.

The occlusion at hand may be due to arteriosclerosis, thrombo-angiitis obliterans, endarteritis obliterans, and other more rare affections. Whatever the nature of the occlusion, it is manifested by decreased flow of blood to the part; whatever its nature, the treatment aims to increase the circulation to the impoverished extremity. In many of these affections arteriospasm is an important factor in the early stages; by diminishing the blood supply and retarding the flow, it may be partially responsible for the onset of thrombosis and eventual tissue death.

If there is little or no vasoconstrictor element, it is illogical to consider an attack directed toward ablation of sympathetic influence. The usual conservative treatment must not be neglected. Suction-pressure therapy may be beneficial in some cases; in many it is of no avail.

Ligation of the main vein to the extremity may be considered in a small group of carefully-selected cases; despite opinions advising against this procedure, the writer has noted gratifying results in a small number of cases so treated. Drugs have been, without exception, disappointing.

When the element of vasoconstriction is considerable, the treatment is best directed toward releasing this factor. Diathermy, the administration of vasodilating drugs by iontophoresis and otherwise, suction-pressure therapy, artificial fever, and other methods have frequently given but temporary relief. Ganglionectomy will, without doubt, increase the total blood flow to the part by an amount equal to or greater than that indicated by preoperative vasomotor studies. Following opera-

<sup>†</sup>This department of California and Western Medicine presents editorial comments by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

tion the increased blood flow will be present day and night, and will be more marked and far more persistent than that obtained by any other means known to the writer. It may be the important factor in establishing a satisfactory collateral circulation to a failing extremity which might otherwise soon progress to ulceration or gangrene. It should be done early, before the vasoconstrictor element has decreased with the progress of the disease. The writer performed lumbar ganglionectomy on such a patient four years ago, the temperature of whose desympathectomized extremities is still maintained at the maximum level. Less satisfactory results are obtained in the upper extremities. The operation requires only about one week hospitalization and carries, in trained hands, practically no mortality. Although the circulation can thus be unequivocally increased, only about half the number of patients are relieved of severe claudication; yet the operation gives them more insurance against the serious complications of the disease than any other procedure.

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## STRABISMUS IN CHILDREN

Dr. S. A. Durr's paper,<sup>1</sup> read by him before the Eye Section of the California State Medical Association in 1936, again draws our attention to the problem of strabismus in children.

Samuel Butler, in Erewhon, described a civilization where medical knowledge is so advanced that sickness is a crime. When people are sick, instead of sending them to a hospital, they are sent to jail, because there is no excuse for ill health. The time will come when somebody will be imprisoned whenever there is a child who has strabismus. Whether the parents or the attending ophthalmologist will be incarcerated in the Bastille for such a heinous crime as the neglect of a child with strabismus, remains to be seen. Probably both the parents and the attending ophthalmologist will be condemned.

The reduction of the number of children seen with strabismus is best illustrated in the case of the school children of San Francisco. In 1929 I reported the summary of eye examinations, personally conducted, of over fifteen thousand children.<sup>2</sup> The number of children found with uncorrected strabismus of varying degrees was 2.4 per cent. Since that time the number of children with strabismus seen in the schools of San Francisco has been greatly reduced. It is now possible to examine the children in a large school and not find one uncorrected case of strabismus. It is my impression that the number of children with strabismus in San Francisco is now less than one per cent.

This has been accomplished through two factors:

1. The education of the school teachers and the follow-up work by the nurses of the San Francisco Department of Public Health of all crosseyed children. Through them the parents have been

educated to the necessity of early medical attention, which a child with strabismus needs. Indirectly the medical profession, especially the pediatrician, has become aware of the fact that children do not "outgrow a squint." The school nurse and the physician realize that if glasses do not promptly correct a squint, operation is indicated, and the age of the child is no contraindication to an eye operation.

2. The popularization of O'Connor's operation for squint makes it possible to operate on a child at any age. Doctor Durr has fully covered the advantages of O'Connor's operation. From the parents' point of view—and after all it is the parents who have to be persuaded as to the necessity of the operation—the fact that hospitalization can be reduced, if necessary, to only twenty-four hours, is one of the most important factors in obtaining permission to operate early on young children. Although I am not so old, I can still remember the time when, after doing an advancement, it was necessary to cover both eyes, use a starch bandage, and keep the child from ten to fourteen days in the hospital. The average age of the last forty strabismus cases operated on at the Stanford University Eye Clinic, with the O'Connor method, was nine and one-half years. Ten years ago the average age of a child operated on for a squint was around fourteen years. It is not necessary for me to emphasize the importance of early operative procedure in squint cases.

Doctor Durr's paper is of great importance in that it again draws the attention of the medical profession to the advantages of the O'Connor operation and its importance in the reduction of the number of uncorrected cases of strabismus.

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## CREEPING ANOXEMIA IN BRONCHO-PNEUMONIA

A positive correlation has been noted by Stadie, Binger, Barach, Hill, Campbell, Poulton, and other investigators, between anoxemia and mortality in pneumonia. If anoxia is a contributory cause of death, it is so by its action on the vital centers—particularly myocardium, medullary and other nerve centers. The nervous system being particularly sensitive to oxygen want, symptoms usually appear when the oxygen unsaturation of the arterial blood drops to 15 per cent.

Evidence of anoxemia, manifested either by diffuse cyanosis, characterized by leaden pallor of the face or by nondiffuse cyanosis with bluish tint of fingernails, chin, lips, ear, cheek, may be apparent so late that valuable time has been lost before oxygen therapy becomes available.

Stadie has shown that O<sub>2</sub> unsaturation of the arterial blood, over 30 per cent, generally results fatally. A higher degree of unsaturation occurs in bronchopneumonia than in the lobar type.

In some of the bronchopneumonia patients in the recent epidemic, symptoms referable to the nervous system included: restlessness, sleeplessness, talkativeness, apprehension, and increased

<sup>1</sup> O'Connor Cinch-Operation Technique, American Journal of Ophthalmology, Vol. 20, pp. 178-180, February, 1937.
2 Eye Examination of School Children, Journal of the American Medical Association, Vol. 93, pp. 911-916, September 21, 1929.